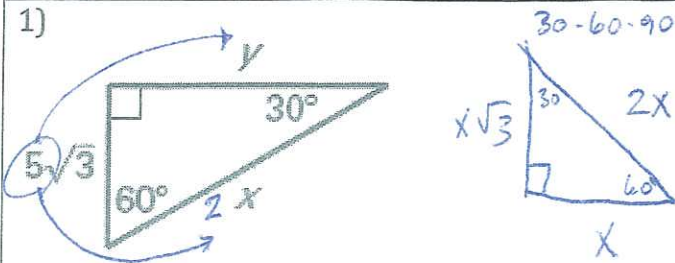


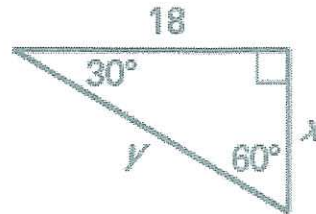
Name: \_\_\_\_\_ TP: \_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!****For problems 1 - 6, find the value of each variable. Write your answers in simplest radical form.**

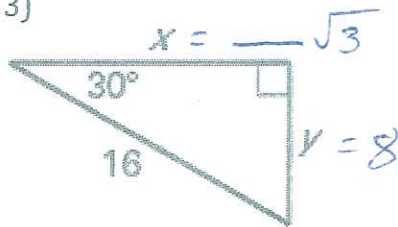
1)



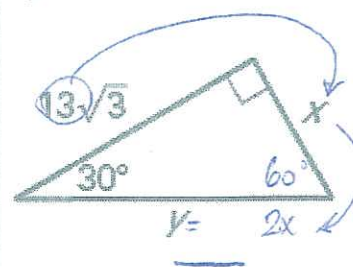
2)



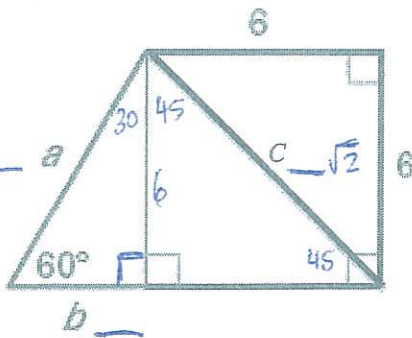
3)



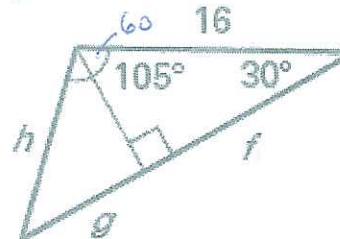
4)



5)



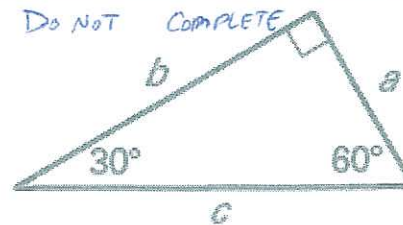
6)



7) Use the figure to the right to complete the table below.

a	9		21	
b		5.4		
c				16

Do NOT COMPLETE

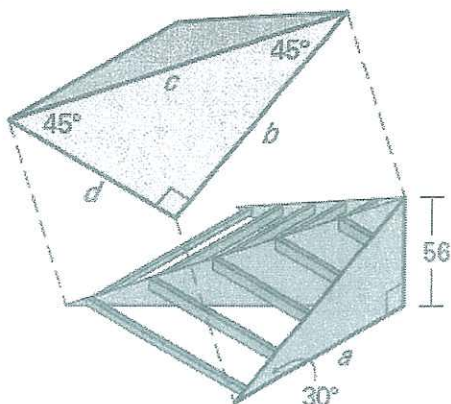


8) The side lengths of a triangle are given. Determine whether it is a 45°-45°-90° triangle, a 30°-60°-90° triangle, or neither.

ANY DOUBLES ARE 45-45-90 Δ's

a. 5, 10,  $5\sqrt{3}$ b. 6, 6,  $6\sqrt{2}$

9) You are using wood to build a pyramid-shaped skateboard ramp. You want each ramp surface to incline at an angle of  $30^\circ$  and the maximum height to be 56 centimeters as shown.



Skip

Use the relationships shown in the diagram to determine the approximate lengths of

a:

b:

c:

d:

10) What are two equivalent ways of writing 64 to the one-third power? Please verify your answers by showing that they equal the same answer.

1)  $64^{\frac{1}{3}}$

2)

EX.  $\sqrt[3]{8}$   
OR  
 $8^{\frac{1}{2}}$

11) Simplify.

NEG.  
EXPONENTS  
SWITCH SPOTS

$$\frac{(a^5 b^{-4} c)^{-2}}{a^{-5} b}$$

SUBTRACT  
EXPONENTS  
WHEN YOU  
DIVIDE

12) Find four integers that are both perfect squares and perfect cubes.

13) In a three dimensional plane. What is the midpoint between (3, 5, 9) and (13, 2, 17)?

$$\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}, \frac{z_1 + z_2}{2} \right)$$

**Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!**

Name: \_\_\_\_\_ TP: \_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle.**

Radical Review - Simplify:

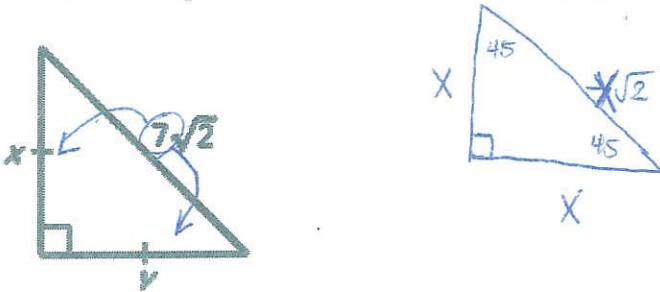
1.  $\sqrt{\frac{2}{25}} = \frac{\sqrt{2}}{\sqrt{25}} = \frac{\sqrt{2}}{5}$

2.  $\sqrt{\frac{3}{11}} = \frac{\sqrt{3}}{\sqrt{11}}$  \* RATIONALIZE THE DENOMINATOR.

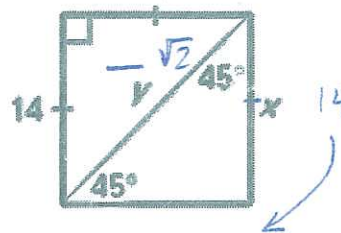
3.  $\sqrt{\frac{6}{7x^3}} = \frac{\sqrt{6}}{\sqrt{7x^3}}$

4.  $\sqrt{\frac{7m^5}{11}} = \frac{\sqrt{7m^5}}{\sqrt{11}}$

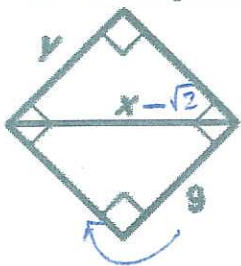
5. Find the value of each variable. Write answers in the simplest radical form. 45-45-90



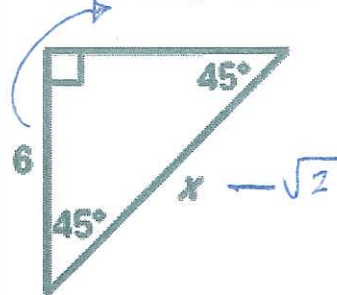
6. Find the value of each variable. Write answers in the simplest radical form.



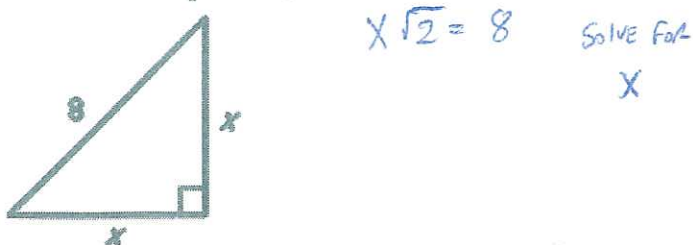
7. Find the value of each variable. Write answers in the simplest radical form.



8. Find the value of each variable. Write answers in the simplest radical form.

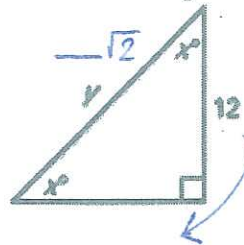


9. Find the value of each variable. Write answers in the simplest radical form.



$$x\sqrt{2} = 8 \quad \text{Solve for } x$$

10. Find the value of each variable. Write answers in the simplest radical form.



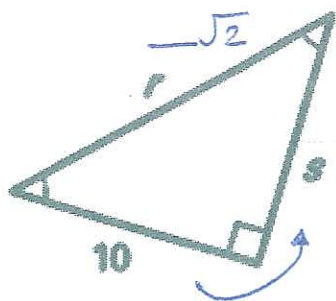
11. Find the value of each variable. Write answers

12. Find the value of each variable. Write answers

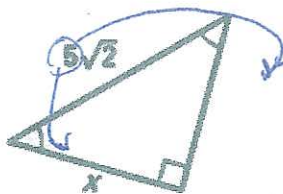
**Give me a Z! G'me an ESTY! PUT IT TOGETHER! ZESTY!**



in the simplest radical form.



in the simplest radical form.



13. Find the distance between the points  $(-121, 18)$  and  $(12, -19)$ .

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

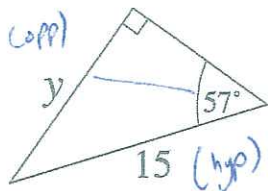
14. Find the distance between the opposite vertices of a square ABCD if  $A(-5, 2)$ ;  $B(5, 2)$ ;  $C(5, -8)$  and  $D(-5, -8)$ .

15. What is the coordinate of the midpoint of the line segment that connects opposite vertices in question 14?

$$\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

16. What is the midpoint of line segment BC from question 14?

17. Solve for side y.



18. Solve for x.

